

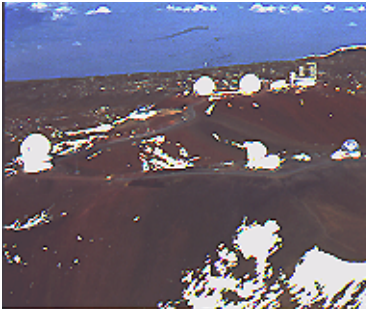
Department of Land and Natural Resources

Sustainability Hotspot

1

MAUNA KEA

~Big Island of Hawaii~



Top to bottom: Mauna Kea is one of the premier spots for Astronomy in the world, Lake Waiau is the only sub-alpine lake in the State, a proliferation of telescope arrays atop Mauna Kea, cultural resources like this shrine abound on the mountain.

The summit of Mauna Kea has become the premier international astronomical center in the world, featuring some of the most sophisticated telescopic arrays in operation today. Due to its elevation, environment, and lack of human presence, the summit of Mauna Kea is a resource attracting global interest as well as millions of dollars in investment.

The University of Hawaii's Institute for Astronomy currently maintains two leases with the State of Hawaii on Mauna Kea, from the Hale Pohaku mid-level facilities at approximately the 8,000-foot elevation to the various telescope facilities at the 13,000-foot summit area. The Hale Pohaku mid-level facilities include the Ellison Onizuka Visitor Center, a maintenance area, an office/recreational/cafeteria area and limited living quarters for research and construction personnel.

The area from the Hale Pohaku mid-level facilities to the summit includes various archaeological, historical, geological, biological and scenic resources. The Mauna Kea Ice Age Natural Area Reserve includes the Keanakakoi Adze quarry and Lake Waiau, a significant geological feature.

Factors which have potential for negative impact on the site's significant resources include:

- unrestricted public access;
- increasing commercial activity;
- further telescope development;
- four-wheel drive off-roading;
- casual hiking;
- construction debris from telescope development;
- litter resulting from increased human traffic.

The road leading up to the Hale Pohaku mid-level facilities is paved. However, the Hale Pohaku mid-level facilities and the summit telescope area is connected by a gravel roadway maintained by the University of Hawaii's, Mauna Kea Support Services. This gravel roadway is generally recommended for four-wheel drive vehicles only. During snow storms, Mauna Kea Support Services will close the gravel roadway as well as the paved road because of unpredictable conditions.

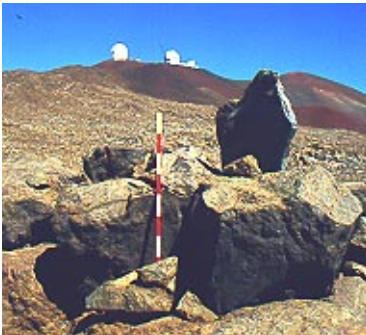
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2

MAUNA KEA

~Big Island of Hawaii~



Top to bottom: The adze quarry attracted the ancient Hawaiians to the mountain for the manufacturing of building tools; the shrines they left to their gods and midden in lava caves are evidence of their habitation; unrestricted public access to the mountain, trash, casual hiking and other factors all have bearing on the sustainability of Mauna Kea's natural and cultural resources; a growing number of telescopes at the summit.

After a snow fall, without controls on access, the area is inundated with snow enthusiasts and curiosity seekers who are oblivious to their long-term impact on the site.

DLNR's Sustainability Hotspot Team for Mauna Kea:

Charlene Unoki - Land Division, Big Island, 974-6203;
Jon Giffin - Forestry and Wildlife;
Marc Smith - Historic Preservation;
Brian Sugiyama - Conservation and Resources Enforcement;

is working toward long-term preservation and sustainability of the Mauna Kea site.

DLNR's Vision for the Future and How to Attain It

The preservation and protection of this area for future generations require establishment of a balance between the needs of the astronomy community, commercial operators and the public. The greatest problem is the lack of understanding and education. Increasing human impact to the land will eventually deteriorate the resources beyond repair.

There has been significant effort in developing a management plan for the area to mitigate impact on the resources. The most recent effort has resulted in the development of the current 1995 Mauna Kea Management Plan which was jointly done by the Department of Land and Natural Resources and the University of Hawaii. By the year 2000, the plan needs to be reviewed and updated by the University of Hawaii, the Department, and by community groups. 🌺



DLNR's Hotspot Team for Mauna Kea (l-r): Unoki, Giffin, Smith, Sugiyama.